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ABSTRACT

A battery of objective examinations administered to Grade 12 students in Toronto and Ontario consisted of tests designated as Scholastic Aptitude Test (Verbal and Mathematics Sections), World History, Economics, Algebra, and Latin. Norms were prepared on the tests for each of three groups of students: General, Technical, and Commercial. The tests written by the groups were specific to their course. Tabular data is provided for class lists of scores for all students in each school, together with norms for each of the three groups and the percentile ranks. Norms computed for the Toronto schools are recorded in conjunction with the Ontario norms in eleven tables, and a graphic comparison of the norms is made in 15 additional figures. The results are addressed to principals and guidance department heads. Norms of Grade 12 students in Toronto secondary schools diverged frequently from the norms of all Grade 12 Ontario secondary students, with the Toronto students generally scoring higher. (LH)

#7 Grade 12 Standardized Dept. Tests: A Ccomparison of Norms of Students in the City of Toronto Sec. Sch. & Ont. Sch. Out-of-Print

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GRADE 12 STANDARDIZED DEPARTMENTAL TESTS: A COMPARISON OF NORMS OF STUDENTS IN THE CITY OF TORONTO SECONDARY SCHOOLS AND ONTARIO SECONDARY SCHOOLS

RESEARCH SERVICE

issued by the
Research Department

TM 001 905

THE BOARD OF EDUCATION FOR THE CITY OF TORONTO

GRADE 12 STANDARDIZED DEPARTMENTAL TESTS:
A COMPARISON OF NORMS OF STUDENTS IN THE CITY OF TORONTO
SECONDARY SCHOOLS AND ONTARIO SECONDARY SCHOOLS

Under regulations laid down by the Ontario Department of Education, a battery of objective examinations was administered in 1961 to Grade 12 students. These tests were prepared by the Department of Educational Research of the Ontario College of Education. The tests administered in March and April were designated as follows:

S.A.T.O. - Scholastic Aptitude Test (Verbal Section, Mathematics Section)

C.T.W.H.O. - World History

C.T.E.H.O. - Economics

C.A.T.O. - Algebra

C.L.T.O. - Latin

Norms were prepared on the tests for each of three groups of students - General, Technical and Commercial (including Special Commercials). The tests written by the groups were specific to their course. That is, all groups wrote the verbal section of the scholastic aptitude test (S.A.T.O.) and the General and Technical students also wrote the mathematics section; General course students wrote the world history test (C.T.W.H.O.), the algebra test (C.A.T.O.) and the Latin test (C.L.T.O.); Technical course students wrote the economics test (C.T.E.H.O.) and the algebra test; Commercial course students wrote the economics test (C.T.E.H.O.).

The Department of Educational Research, O.C.E. sent out class lists of scores for all students in each school together with norms for each of the three groups. Profiles were also sent to the schools showing all the scores obtained by the students as well as the percentile ranks.

Through the cooperation of the Department of Educational Research, O.C.E., the profiles for all Grade 12 students in the City of Toronto Secondary Schools were made available to the Board's Research Department. Norms were computed for the Toronto Schools and are recorded in conjunction with the Ontario norms in Tables 1 to 11. A graphic comparison of the norms is made in Figures 1 to 15.

A percentile rank is, by definition, the percentage of cases lying below a specified point on a continuous scale of values. Thus on the scholastic aptitude test (S.A.T.O.) 51% of the Toronto students scored below 35 on the verbal section while 68% of all Ontario Grade 12 students scored below 35. (Table 1).

TABLE 1

PERCENTILE RANK NORMS OF GENERAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON S.A.T.O. (ACADEMIC APTITUDE) TEST - VERBAL

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
59	0	100.0	100.0
58	2	100.0	100.0
57	0	99.9	99.9
56	8	99.7	99.8
55	6	99.3	99.6
54	15	98.8	99.3
53	15	98.1	98.8
52	25	97	98.2
51	21	96	98.0
50	26	95	97
49	33	93	96
48	45	91	95
47	46	89	94
46	41	87	92
45	39	85	91
44	73	82	89
43	58	78	88
42	52	76	86
41	62	73	83
40	60	70	81
39	67	66	79
38	79	63	76

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
37	81	59	74
36	78	55	71
35	58	51	68
34	92	47	64
33	66	43	61
32	71	40	58
31	67	36	54
30	70	33	51
29	79	29	47
28	76	25	43
27	61	22	40
26	58	19	36
25	58	16	32
24	43	13	29
23	39	11	25
22	38	9	22
21	45	7	19
20	28	5	16
19	26	4	13
18	17	3	10
17	14	2	8
16	9	1.4	6
15	10	.9	5
14	1	.6	3
13	5	.5	2
12	2	.3	1.5

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
11	0	.3	1.0
10	1	.2	.6
9	1	.2	.4
8	1	.1	.2
7	0	.1	.1
6	1	.1	.1
5	0	.1	0.0
4	1	0.0	0.0

N = 1,970 N = 33,352

TABLE 2

PERCENTILE RANK NORMS OF TECHNICAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON S.A.T.O. (ACADEMIC APTITUDE) TEST - VERBAL

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
59	0	100.0	100.0
58	0	100.0	100.0
57	0	100.0	100.0
56	0	100.0	100.0
55	0	100.0	100.0
54	0	100.0	100.0
53	0	100.0	100.0
52	0	100.0	100.0
51	0	100.0	99.9
50	1	99.9	99.9
49	0	99.8	99.8
48	1	99.7	99.7
47	0	99.6	99.6
46	0	99.6	99.6
45	3	99.3	99.4
44	1	98.9	99.1
43	4	98.4	98.8
42	3	98.0	98.4
41	5	97	98.0
40	4	96	97
39	8	93	97
38	4	93	96
37	5	93	96

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
36	11	91	95
35	11	89	93
34	3	87	92
33	11	86	91
32	14	83	90
31	23	80	87
30	20	75	85
29	9	72	82
28	14	70	80
27	17	67	77
26	20	63	73
25	26	58	69
24	17	54	65
23	26	49	61
22	23	45	56
21	23	40	50
20	24	35	45
19	16	31	40
18	24	27	34
17	21	22	28
16	27	17	23
15	15	13	18
14	15	10	14
13	11	7	10
12	8	6	7

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
11	8	4	5
10	10	2	3
9	3	.7	1.4
8	2	.2	.8
7	0	0.0	.3
6	0	0.0	.1
4	0	0.0	0.0
	N = 491		N = 2,562

TABLE 3

PERCENTILE RANK NORMS OF COMMERCIAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON S.A.T.O. (ACADEMIC APTITUDE) TEST - VERBAL

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
59	0	100.0	100.0
58	0	100.0	100.0
57	0	100.0	100.0
56	0	100.0	100.0
55	0	100.0	100.0
54	0	100.0	100.0
53	0	100.0	99.9
52	0	100.0	99.9
51	0	100.0	99.8
50	2	99.8	99.7
49	2	99.0	99.6
48	0	98.7	99.4
47	0	98.7	99.2
46	0	98.7	99.0
45	1	98.5	98.6
44	1	98.2	98.4
43	4	97	98.0
42	3	96	97
41	0	96	97
40	3	95	96
39	0	95	96
38	5	94	95

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
37	2	93	94
36	5	92	93
35	5	90	92
34	5	88	90
33	5	87	89
32	6	85	88
31	6	83	86
30	5	81	83
29	17	78	81
28	8	73	78
27	9	71	75
26	8	68	72
25	15	64	68
24	18	59	64
23	11	54	60
22	12	50	56
21	21	45	51
20	19	38	45
19	20	32	40
18	15	26	34
17	13	21	29
16	16	17	24
15	10	12	19
14	7	10	15
13	5	8	11

Score (Maximum 59)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
12	5	6	7
11	4	5	5
10	3	3	3
9	5	2	1.8
8	2	1.0	.8
7	0	.7	.4
6	0	.7	.2
5	1	.5	.1
4	1	.2	.1
3	0	0.0	0.0

N = 305 N = 5702

TABLE 4

PERCENTILE RANK NORMS OF GENERAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON S.A.T.O. (ACADEMIC APTITUDE) TEST - MATHEMATICS

Score (Maximum 30)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
30	0	100.0	100.0
29	1	100.0	100.0
28	1	99.9	99.9
27	3	99.8	99.9
26	4	99.6	99.7
25	5	99.4	99.5
24	10	99.0	99.2
23	16	98.4	98.6
22	17	98.0	98.0
21	33	96	97
20	42	94	96
19	55	92	95
18	64	89	93
17	93	85	90
16	88	80	87
15	108	75	83
14	135	69	78
13	112	63	73
12	155	56	66
11	173	48	59
10	167	39	50
9	175	30	41

Score (Maximum 30)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
8	138	22	32
7	108	16	24
6	105	11	16
5	75	6	10
4	47	3	5
3	20	1.3	2
2	12	.5	1.0
1	4	.1	.3
0	0	0.0	.1

N = 1,966 N = 33,352

TABLE 5

PERCENTILE RANK NORMS OF TECHNICAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON S.A.T.O. (ACADEMIC APTITUDE) TEST - MATHEMATICS

Score (Maximum 30)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
30	0	100.0	100.0
29	0	100.0	100.0
28	0	100.0	100.0
27	0	100.0	100.0
26	0	100.0	100.0
25	0	100.0	100.0
24	0	100.0	100.0
23	1	99.9	99.9
22	0	99.8	99.8
21	2	99.6	99.6
20	0	99.4	99.3
19	6	98.8	98.8
18	4	98.0	98.2
17	5	97	97
16	10	95	96
15	11	93	94
14	26	89	91
13	23	84	87
12	35	78	81
11	30	72	75
10	54	63	67
9	54	52	57

Score (Maximum 30)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
8	48	42	47
7	57	31	36
6	42	21	26
5	39	13	16
4	20	7	9
3	11	3	4
2	9	1.3	1.6
1	2	.2	.4
0	0	0.0	.1
	N = 489		N = 2562

TABLE 6

PERCENTILE RANK NORMS OF GENERAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.T.W.H.C. TEST - WORLD HISTORY

Score (Maximum 80)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
80	0	100.0	100.0
79	0	100.0	100.0
78	0	100.0	100.0
77	0	100.0	100.0
76	0	100.0	100.0
75	0	100.0	100.0
74	2	100.0	100.0
73	1	99.9	99.9
72	2	99.8	99.9
71	6	99.6	99.8
70	6	99.0	99.7
69	10	98.9	99.6
68	11	98.0	99.4
67	11	98.0	99.2
66	20	97	98.9
65	13	96	98.6
64	14	95	98.2
63	23	94	98.0
62	27	93	97
61	34	92	96
60	32	90	95
59	43	88	94

Score (Maximum 80)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
58	36	86	92
57	47	84	91
56	44	81	89
55	56	79	87
54	83	75	85
53	68	71	82
52	79	67	80
51	79	63	77
50	72	59	73
49	78	56	70
48	78	52	66
47	89	47	63
46	96	42	59
45	85	38	55
44	74	34	51
43	55	30	47
42	77	27	43
41	55	23	39
40	60	20	35
39	49	18	31
38	53	15	28
37	43	12	25
36	37	10	21
35	42	8	18
34	24	7	16

Score (Maximum 80)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
33	21	5	13
32	12	5	11
31	19	4	9
30	12	3	7
29	9	2	6
28	13	1.9	5
27	9	1.0	4
26	5	1.0	3
25	5	.7	2
24	6	.4	1.5
23	1	.2	1.0
22	1	.2	.8
21	0	.2	.6
20	1	.1	.4
19	1	.1	.3
18	0	.1	.2
17	1	0.0	.1
16	0	0.0	.1
15	0	0.0	.1
14	0	0.0	0.0
	N = 1,930		N = 31,458

TABLE 7

PERCENTILE RANK NORMS OF TECHNICAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.T.E.H.O. TEST - ECONOMICS

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
100	0	100.0	100.0
99	0	100.0	100.0
98	0	100.0	100.0
97	0	100.0	100.0
96	0	100.0	100.0
95	0	100.0	100.0
94	0	100.0	100.0
93	0	100.0	100.0
92	0	100.0	100.0
91	0	100.0	100.0
90	0	100.0	100.0
89	0	100.0	100.0
88	0	100.0	100.0
87	0	100.0	99.9
86	0	100.0	99.8
85	0	100.0	99.8
84	0	100.0	99.7
83	1	99.9	99.6
82	3	99.5	99.4
81	1	99.2	99.2
80	1	99.0	98.8
79	2	98.7	98.4

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
78	1	98.4	98.0
77	4	98.0	97
76	4	97	96
75	5	96	95
74	6	95	94
73	10	94	93
72	14	92	91
71	12	89	90
70	17	87	87
69	8	84	85
68	10	83	83
67	20	80	80
66	16	77	77
65	17	74	74
64	13	71	70
63	32	67	66
62	18	62	62
61	27	58	59
60	17	54	55
59	19	51	51
58	13	48	47
57	18	45	43
56	23	41	40
55	12	38	36
54	26	35	33
53	22	30	29

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
52	18	27	26
51	14	24	23
50	10	21	21
49	20	19	18
48	17	15	16
47	10	13	13
46	12	11	11
45	9	9	9
44	9	7	7
43	3	6	6
42	8	5	5
41	2	4	4
40	2	4	3
39	2	3	3
38	5	3	2
37	2	2	1.8
36	3	1.7	1.4
35	3	1.2	1.0
34	1	.8	.7
33	0	.7	.6
32	1	.6	.5
31	1	.5	.4
30	0	.4	.3
29	0	.4	.3
28	1	.3	.2

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
27	1	.1	.1
26	0	0.0	.1
25	0	0.0	.1
24	0	0.0	0.0
	N = 546		N = 2,467

TABLE 8

PERCENTILE RANK NORMS OF COMMERCIAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.T.E.H.O. TEST - ECONOMICS

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
100	0	100.0	100.0
99	0	100.0	100.0
98	0	100.0	100.0
97	0	100.0	100.0
96	0	100.0	100.0
95	0	100.0	100.0
94	0	100.0	100.0
93	0	100.0	100.0
92	0	100.0	100.0
91	0	100.0	100.0
90	0	100.0	100.0
89	0	100.0	100.0
88	0	100.0	99.9
87	1	99.8	99.8
86	0	99.7	99.7
85	0	99.7	99.6
84	0	99.7	99.5
83	0	99.7	99.3
82	1	99.5	99.1
81	0	99.4	98.8
80	3	98.9	98.2
79	1	98.2	98.0

(Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
78	1	98.0	97
77	2	97	96
76	1	97	95
75	4	96	94
74	3	95	93
73	6	93	92
72	7	91	90
71	5	89	89
70	4	88	86
69	3	87	84
68	6	85	82
67	5	84	79
66	9	81	77
65	6	79	74
64	9	76	71
63	9	73	67
62	5	71	64
61	13	68	61
60	10	64	57
59	12	61	54
58	12	57	50
57	12	53	46
56	9	50	43
55	4	47	39
54	9	45	36

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
53	5	43	33
52	12	40	30
51	9	37	27
50	5	34	25
49	9	32	22
48	6	30	19
47	8	27	17
46	10	25	15
45	11	21	13
44	5	18	11
43	6	17	9
42	3	15	8
41	1	15	6
40	3	14	6
39	3	13	5
38	4	12	4
37	7	10	3
36	1	9	3
35	5	8	2
34	4	6	1.8
33	4	5	1.4
32	0	4	1.0
31	4	4	.8
30	3	2	.6
29	0	2	.5

Score (Maximum 100)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
28	2	1.6	.4
27	2	1.0	.3
26	0	.7	.3
25	0	.7	.2
24	0	.7	.2
23	0	.7	.2
22	1	.5	.1
21	0	.3	.1
20	0	.3	.1
19	0	.3	.1
18	1	.2	0.0
17	0	0.0	0.0

N = 306 N = 5,274

TABLE 9

PERCENTILE RANK NORMS OF GENERAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.A.T.O. TEST - ALGEBRA

Score (Maximum 46)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
46	0	100.0	100.0
45	1	100.0	100.0
44	0	99.9	100.0
43	0	99.9	100.0
42	0	99.9	99.9
41	0	99.9	99.9
40	1	99.9	99.9
39	2	99.8	99.8
38	2	99.7	99.8
37	3	99.6	99.7
36	3	99.4	99.6
35	3	99.3	99.4
34	5	99.0	99.2
33	9	98.6	99.0
32	9	98.1	98.6
31	7	98.0	98.2
30	11	97	98.0
29	24	96	97
28	37	95	96
27	29	93	95
26	43	91	94
25	43	88	92
24	63	85	90

Score (Maximum 46)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
23	65	82	87
22	67	78	84
21	76	74	80
20	84	70	76
19	108	64	71
18	104	58	66
17	132	52	60
16	107	45	54
15	121	39	47
14	123	32	40
13	108	25	33
12	110	19	27
11	82	14	20
10	65	10	15
9	60	6	10
8	32	4	7
7	28	2	4
6	14	1.2	2
5	7	.4	1.4
4	3	.1	.7
3	0	.1	.4
2	1	0.0	.3
1	0	0.0	.2
0	0	0.0	.1

N = 1,792

N = 30,993

TABLE 10

PERCENTILE RANK NORMS OF TECHNICAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.A.T.O. TEST - ALGEBRA

Score (Maximum 46)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
46	0	100.0	100.0
45	0	100.0	100.0
44	0	100.0	100.0
43	0	100.0	100.0
42	0	100.0	100.0
41	0	100.0	100.0
40	0	100.0	100.0
39	0	100.0	100.0
38	0	100.0	100.0
37	0	100.0	100.0
36	0	100.0	100.0
35	0	100.0	99.9
34	0	100.0	99.9
33	0	100.0	99.9
32	0	100.0	99.9
31	0	100.0	99.9
30	0	100.0	99.9
29	0	100.0	99.9
28	0	100.0	99.8
27	1	99.9	99.8
26	0	99.8	99.7
25	2	99.6	99.5

Score (Maximum 46)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
24	1	99.4	99.3
23	5	98.8	99.1
22	4	98.0	98.8
21	5	97	98.2
20	9	96	97
19	14	94	96
18	16	91	94
17	11	88	92
16	27	85	88
15	26	80	83
14	40	74	78
13	39	67	71
12	55	58	63
11	61	47	55
10	46	37	45
9	43	29	35
8	41	21	26
7	41	14	18
6	24	8	11
5	15	4	6
4	11	1.8	3
3	2	.6	1.2
2	1	.3	.6
1	1	.1	.3
0	0	0.0	.1

N = 541 31 N = 2,307

TABLE 11

PERCENTILE RANK NORMS OF GENERAL COURSE PUPILS
IN TORONTO AND ALL ONTARIO SECONDARY SCHOOLS
ON C.L.T.O. TEST - LATIN

Score (Maximum 115)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
115	0	100.0	100.0
114	0	100.0	100.0
113	1	100.0	100.0
112	0	99.9	100.0
111	1	99.9	100.0
110	0	99.8	100.0
109	0	99.8	99.9
108	0	99.8	99.9
107	2	99.7	99.9
106	0	99.7	99.8
105	2	99.6	99.8
104	2	99.4	99.7
103	1	99.3	99.6
102	2	99.1	99.5
101	5	98.9	99.4
100	4	98.5	99.2
99	4	98.1	99.0
98	7	98.0	98.8
97	3	97	98.4
96	7	97	98.0
95	7	96	98.0
94	8	96	97

Score (Maximum 115)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
93	15	95	97
92	6	94	96
91	13	93	96
90	18	92	95
89	11	90	94
88	10	89	94
87	19	88	93
86	13	87	92
85	10	86	91
84	20	85	90
83	16	83	89
82	15	82	88
81	10	81	87
80	25	79	85
79	15	77	84
78	23	76	82
77	24	74	81
76	19	72	79
75	25	70	77
74	21	68	76
73	30	66	74
72	24	64	72
71	30	61	70
70	25	60	67
69	46	56	65

Score (Maximum 115)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
68	31	53	63
67	30	50	60
66	19	48	58
65	30	46	55
64	36	43	53
63	35	40	50
62	32	37	48
61	25	35	45
60	45	32	43
59	27	29	40
58	40	26	38
57	28	23	35
56	27	20	32
55	24	18	30
54	22	16	28
53	23	14	25
52	17	13	23
51	14	11	21
50	13	11	19
49	13	9	17
48	14	8	15
47	19	6	13
46	10	5	12
45	10	4	10
44	7	4	9

Score (Maximum 115)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
43	4	3	7
42	10	3	6
41	3	2	6
40	3	1.8	5
39	3	1.5	4
38	7	1.1	3
37	2	.7	3
36	2	.5	2
35	3	.3	1.8
34	0	.2	1.4
33	0	.2	1.2
32	0	.2	1.0
31	0	.2	.8
30	0	.2	.6
29	1	.1	.5
28	0	.1	.4
27	1	0.0	.3
26	0	0.0	.2
25	0	0.0	.2
24	0	0.0	.1
23	0	0.0	.1
22	0	0.0	.1
21	0	0.0	.1
20	0	0.0	.1

Score (Maximum 115)	TORONTO SECONDARY SCHOOLS		ALL ONTARIO SECONDARY SCHOOLS
	Frequency	Percentile	Percentile
19	0	0.0	.1
18	0	0.0	0.0

N = 1,169 N = 15,208

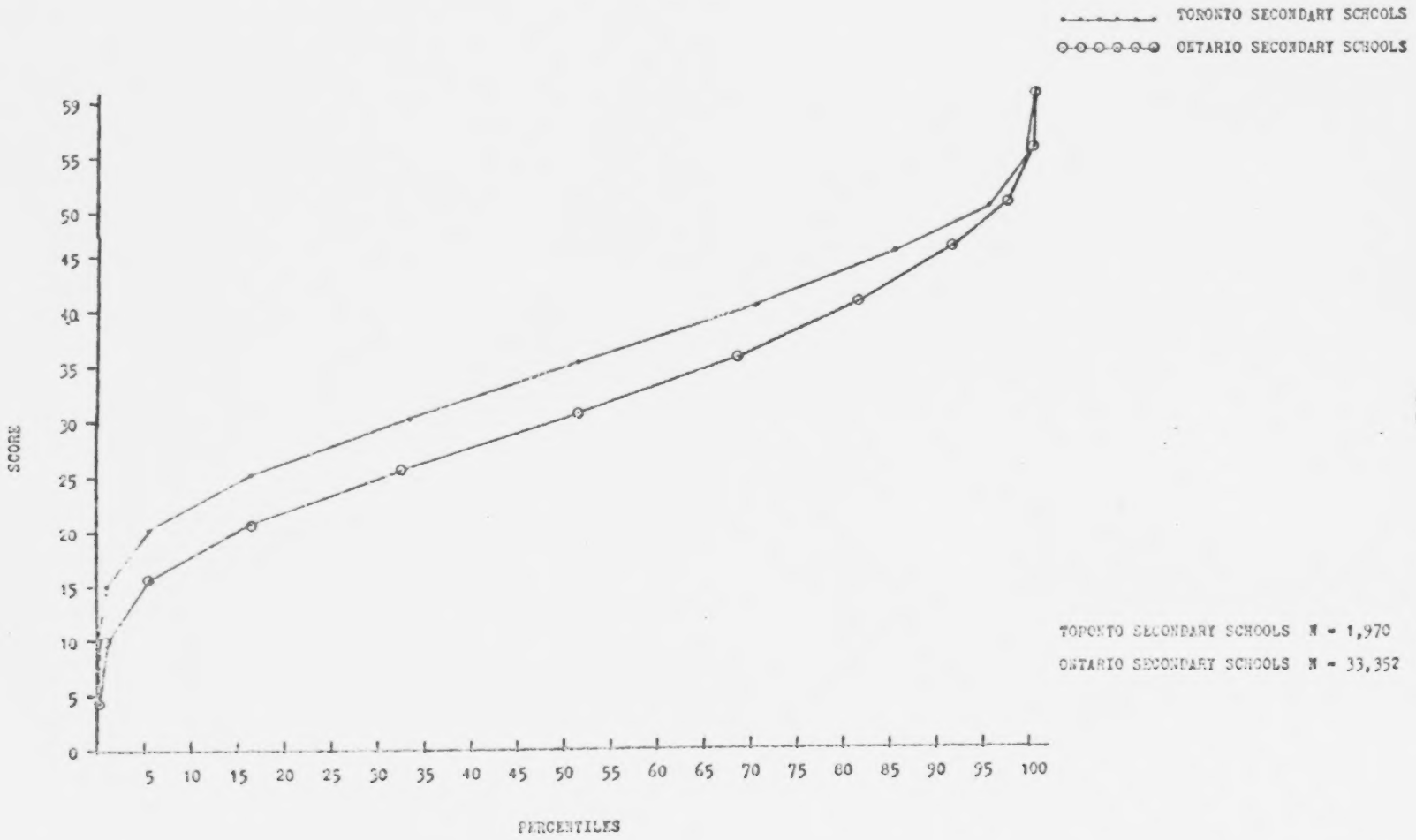
S.A.T.O.-VERBAL (General Course Students)

At the upper end of the scale the two populations are quite similar. After the 98th percentile rank the divergence begins to increase until 5 points separate the two populations at the 50th percentile with the Toronto population attaining higher scores. At the lower end of the scale the divergence continues with 25% of the Toronto population scoring below 28 and 25% of the Ontario population scoring below 23.

FIGURE 1

S.A.T.O.

VERBAL GRADE XII GENERAL COURSE



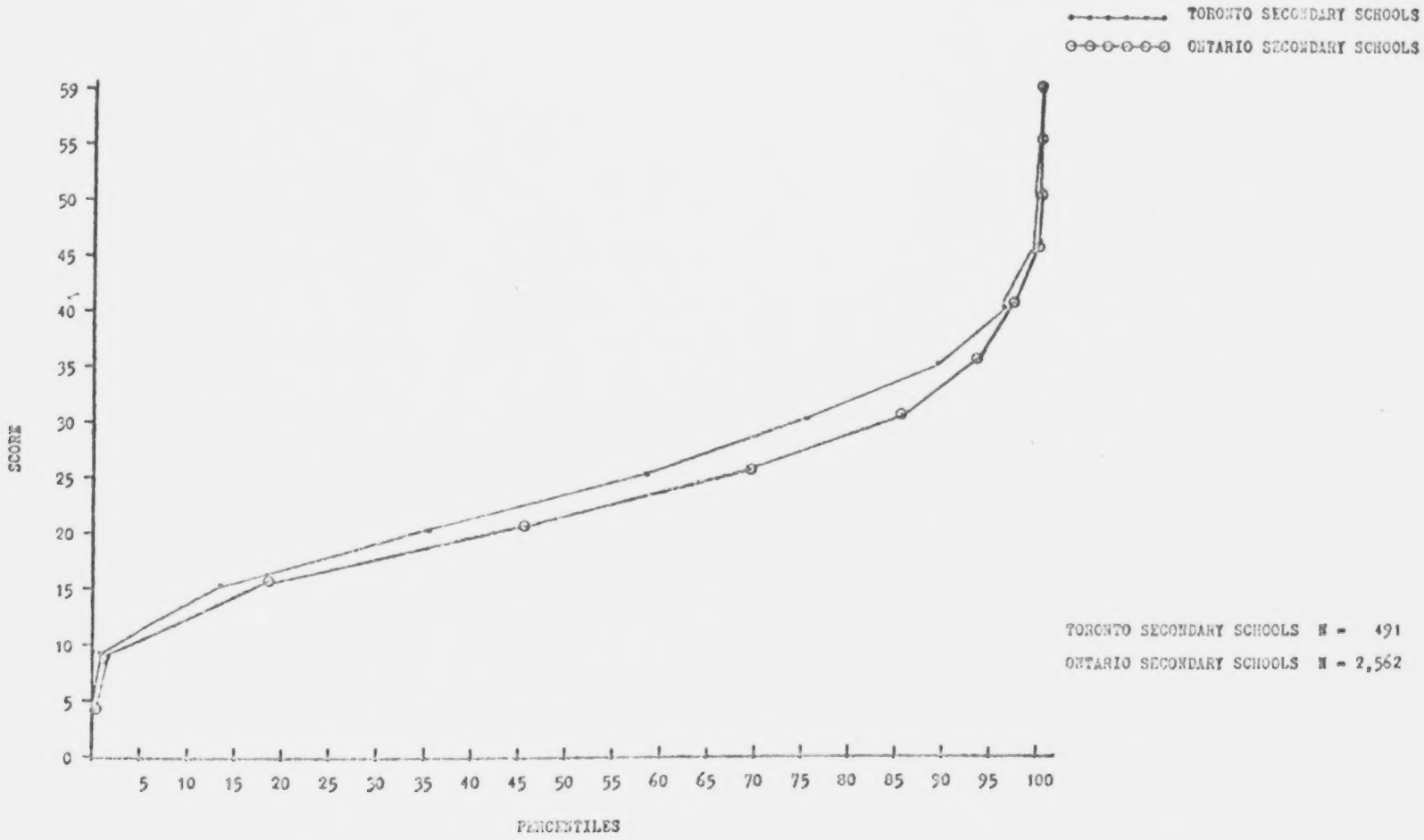
S.A.T.O.-VERBAL (Technical Course Students)

Differences are not so marked in comparing the Toronto Technical students with Ontario Technical students although the Toronto population still scores higher. Thus at the 80th percentile Toronto students are at 31 on the scale while Ontario students are at 28; at the 50th percentile Toronto students are at 23 on the scale while Ontario students are at 21; at the 10th percentile Toronto students are at 14 while Ontario students are at 13.

FIGURE 2

S.A.T.O.

VERBAL GRADE XII TECHNICAL COURSE



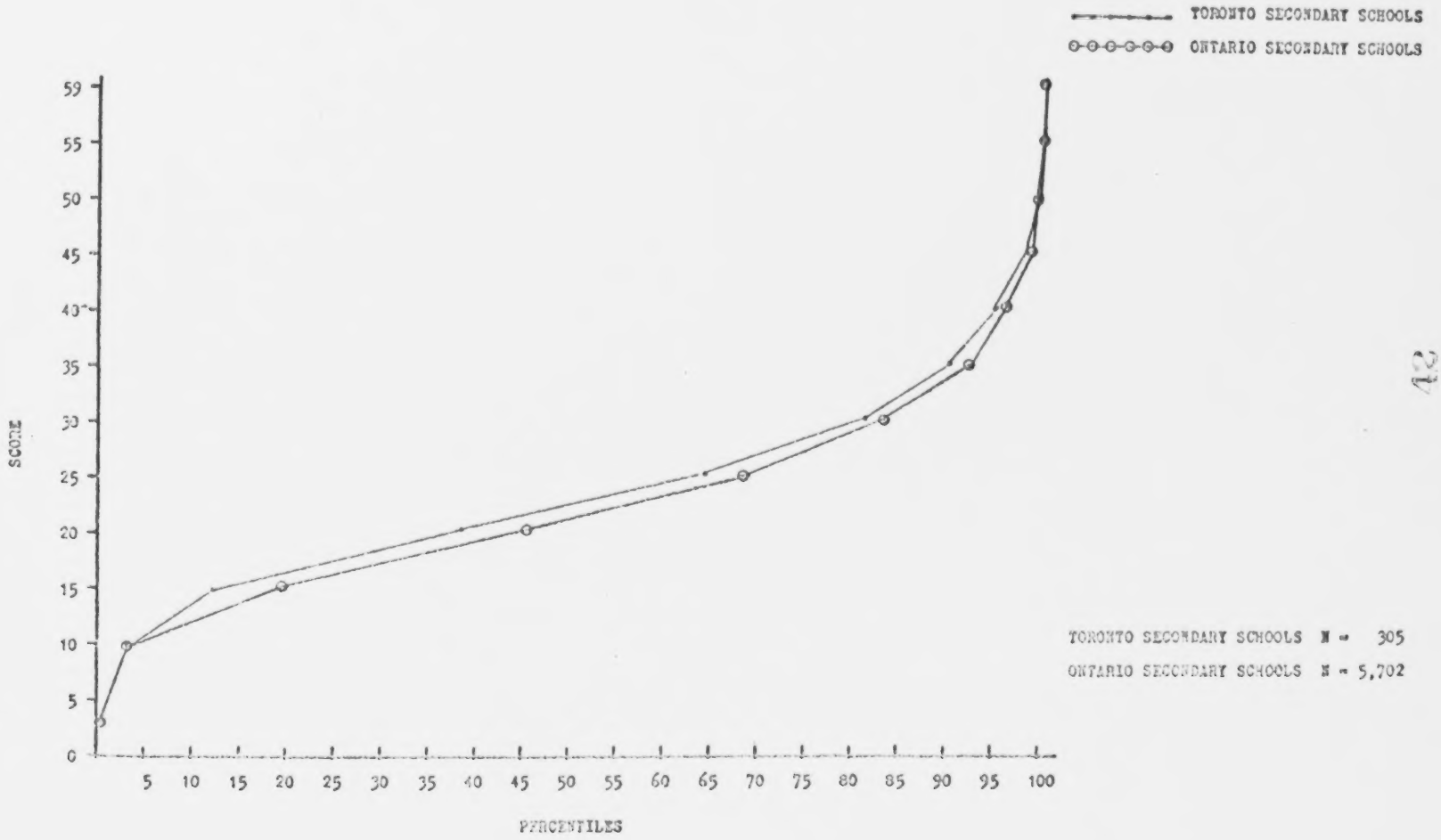
S.A.T.O.-VERBAL (Commercial Course Students)

A very slight superiority is shown for the Toronto Commercial students when compared with Ontario Commercial students. Thus only one point on the scale separates the two populations at the 80th, 50th and 10th percentile ranks.

FIGURE 3

S.A.T.O.

VERBAL GRADE XII COMMERCIAL COURSE

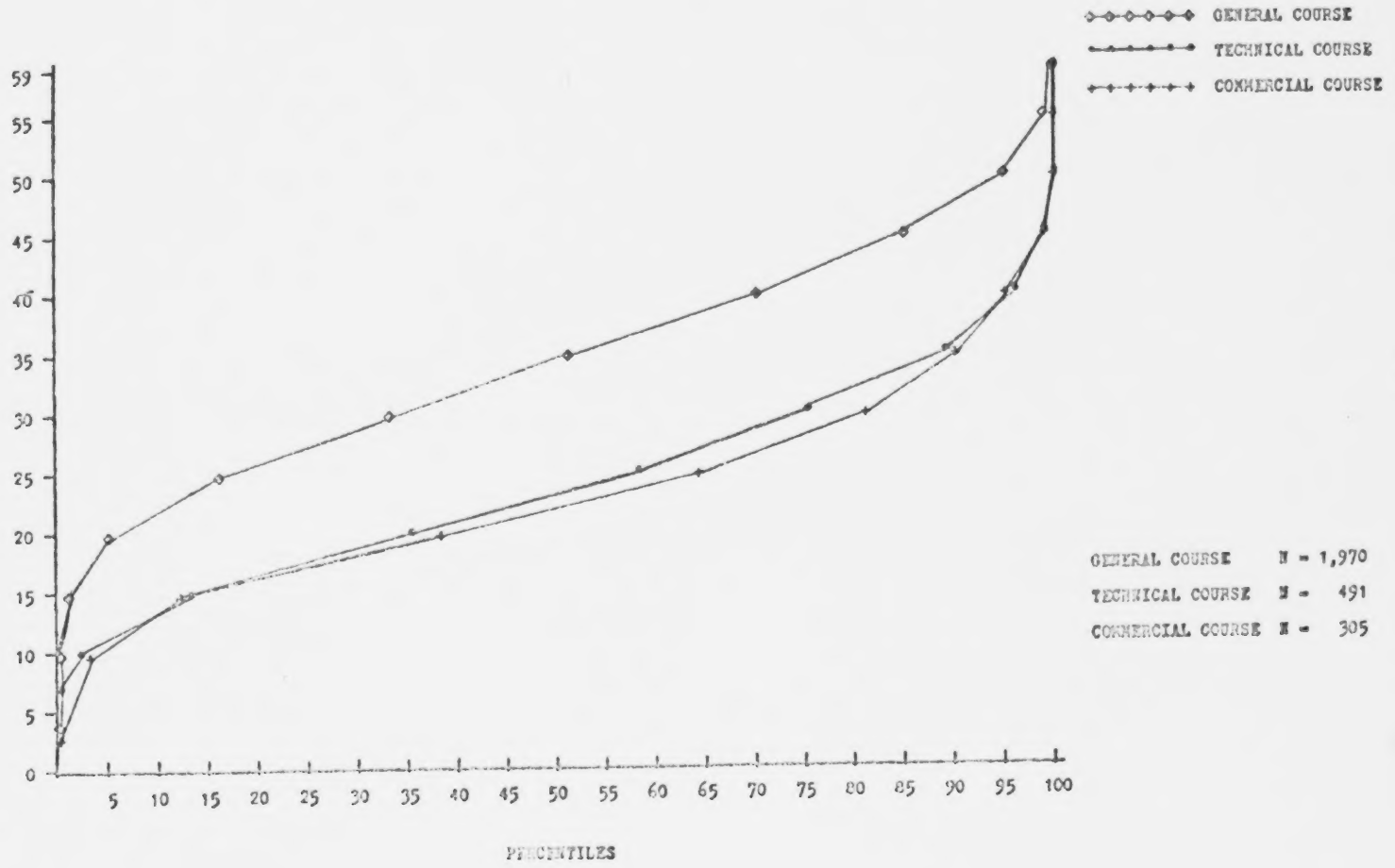


COMPARISON OF THE THREE TORONTO GROUPS ON S.A.T.O.-VERBAL

There is a marked divergence between the scores obtained by students in the General course and those in Technical and Commercial courses. Over 10 points on the scale separate the General students from the Technical students at the 75th, 50th and 25th percentile rank. The Technical students, in turn, tend to score higher than the Commercial students but the difference amounts to little more than one point on the scale, and at the 25th percentile their positions on the scale are identical.

FIGURE 4

COMPARISON OF THE THREE TORONTO GROUPS ON S.A.T.O.-VERBAL



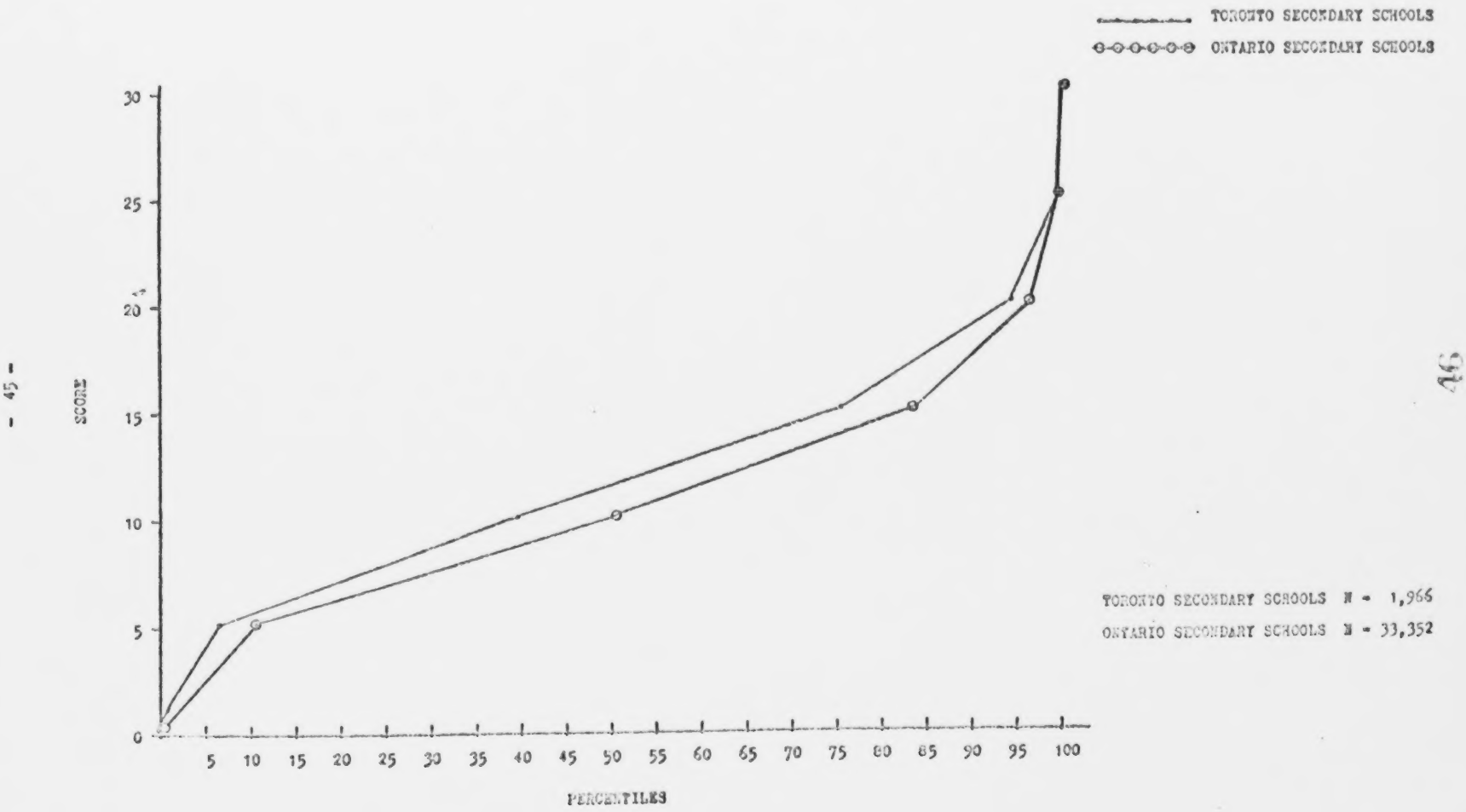
S.A.T.O.-MATHEMATICS (General Course Students)

After the 98th percentile, scores begin to diverge. Seventy-five per cent of the Toronto population scored above 15 while 75% of the Ontario population scored above 14. At the 50th percentile the Toronto population is at 12 on the scale while the Ontario population is at 10. At the 25th percentile the Toronto population is at 9 and the Ontario population is at 7.

FIGURE 5

S.A.T.O.

MATHEMATICS GRADE XII GENERAL COURSE



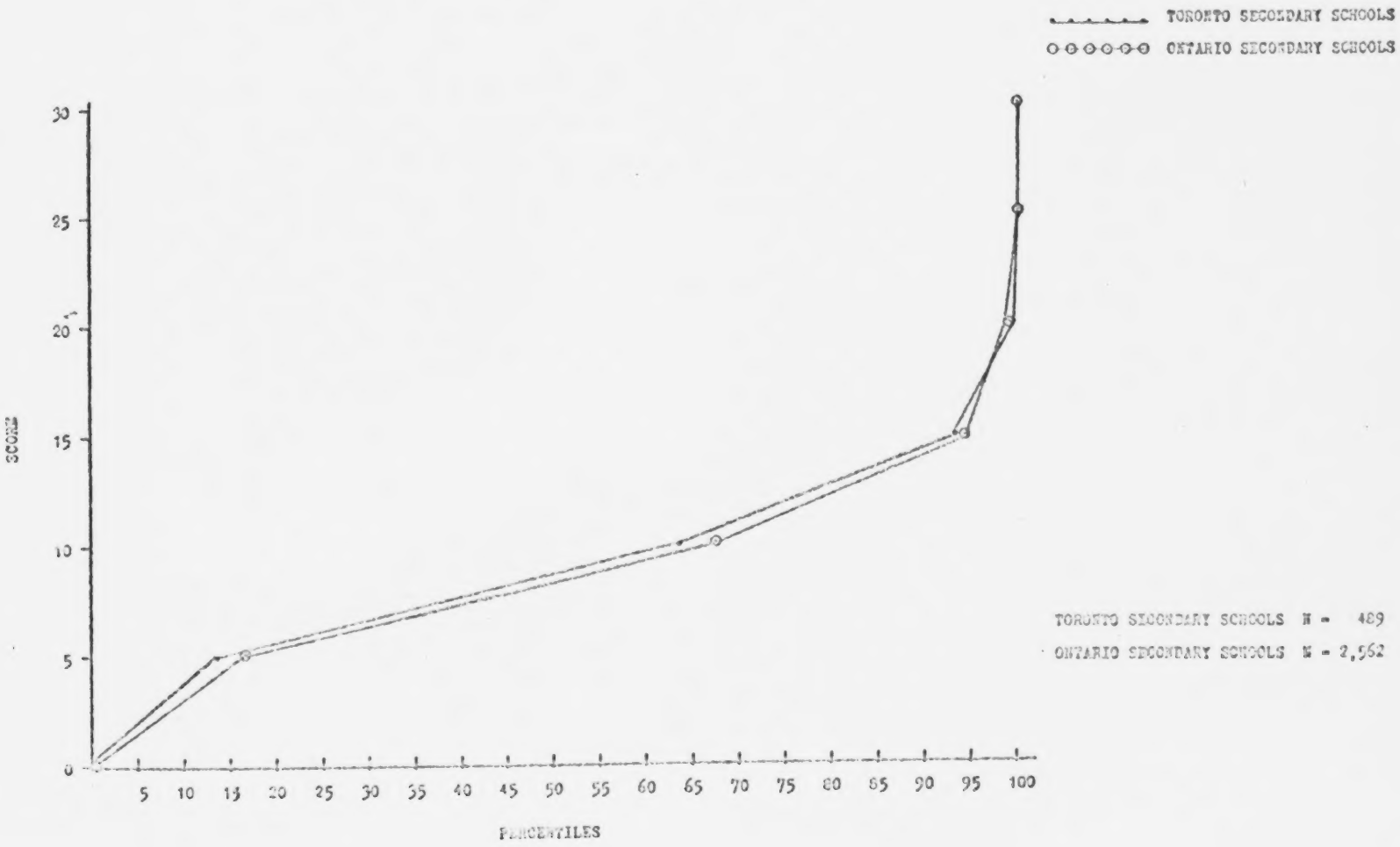
S.A.T.C.-MATHEMATICS (Technical Course Students)

At the 97th percentile both Ontario and Toronto Technical students are at the same point on the scale. Only half a point separates the two populations at the 50th percentile rank and throughout the distribution.

FIGURE 6

S.A.T.O.

MATHEMATICS GRADE XII TECHNICAL COURSE

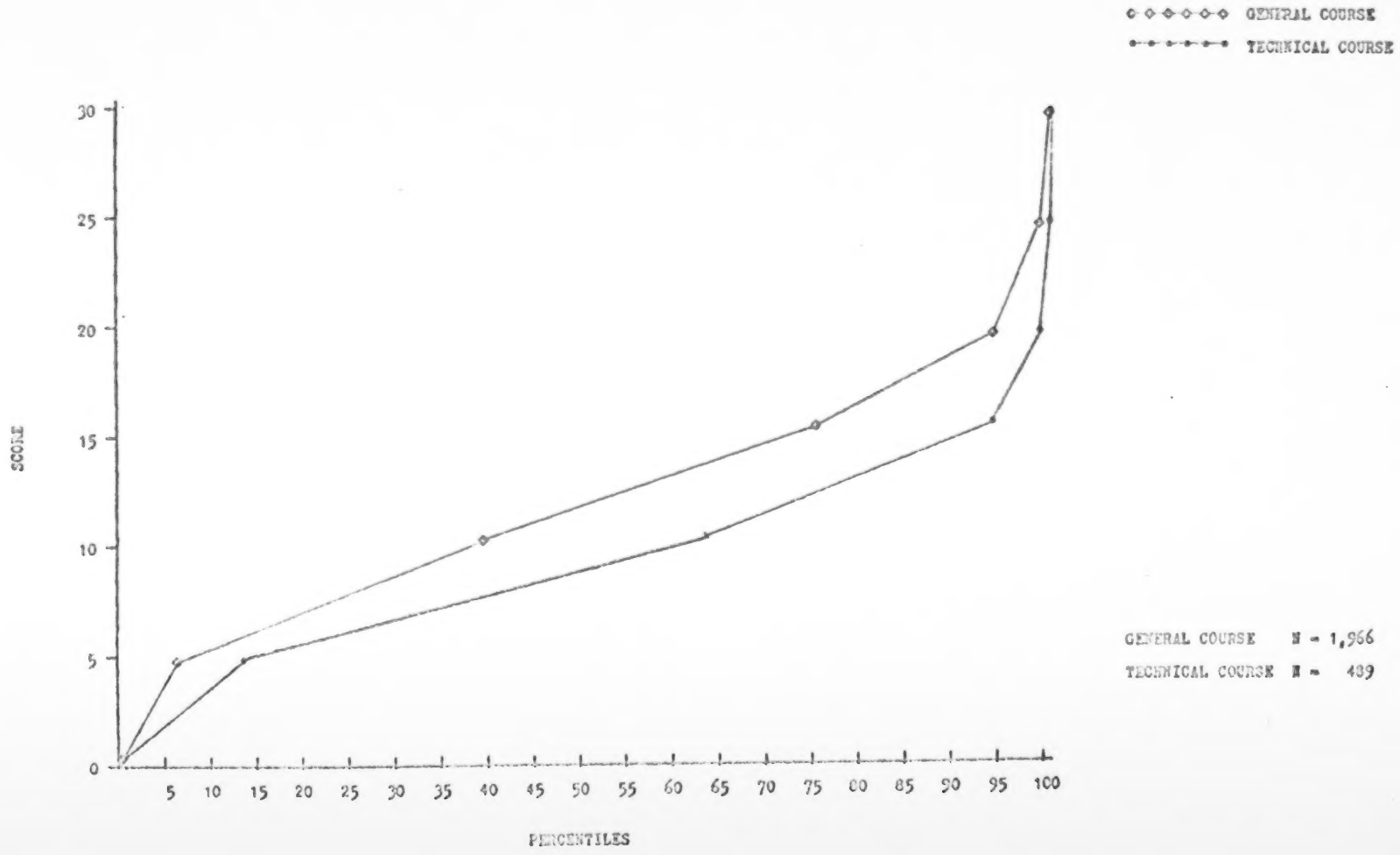


COMPARISON OF TORONTO GENERAL AND TECHNICAL STUDENTS ON S.A.T.O.-MATHEMATICS

In general two points on the scale separate the General course students from the Technical students, with the General course obtaining higher scores.

FIGURE 7

COMPARISON OF TORONTO GENERAL AND TECHNICAL STUDENTS ON S.A.T.Q.-MATHEMATICS



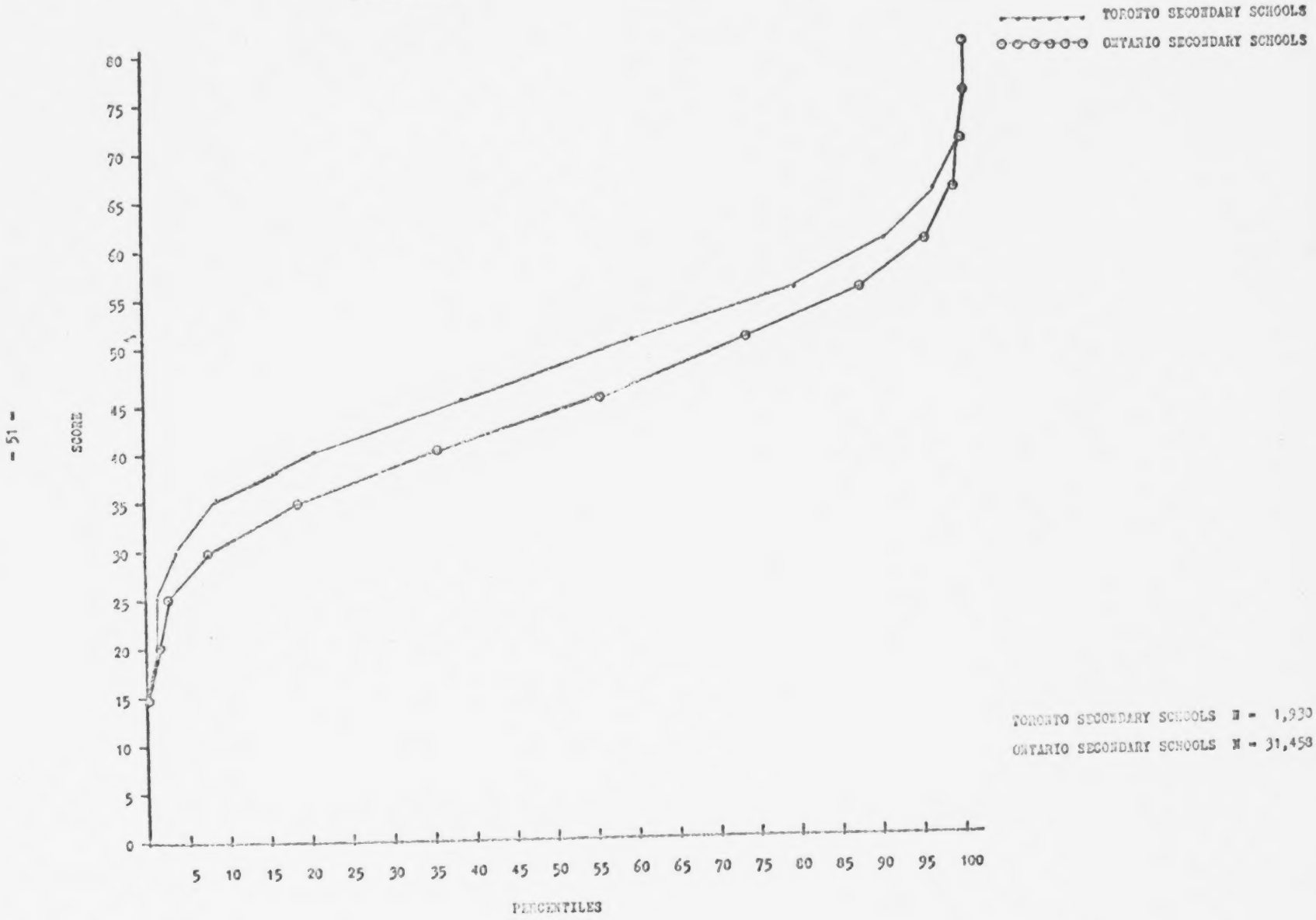
C.T.W.H.O. (General Course Students)

A higher percentage of Ontario students score below particular points when compared with Toronto students on the test in World History. Thus 85% of the Ontario students had scores below 54 while 75% of the Toronto students had scores below that point. At the 50th percentile rank the Toronto group is at 48 on the scale while the Ontario group is at 44. These general differences continue to the end of the percentile ranks.

FIGURE 8

C.T.V.E.N.O.

WORLD HISTORY GRADE XII GENERAL COURSE



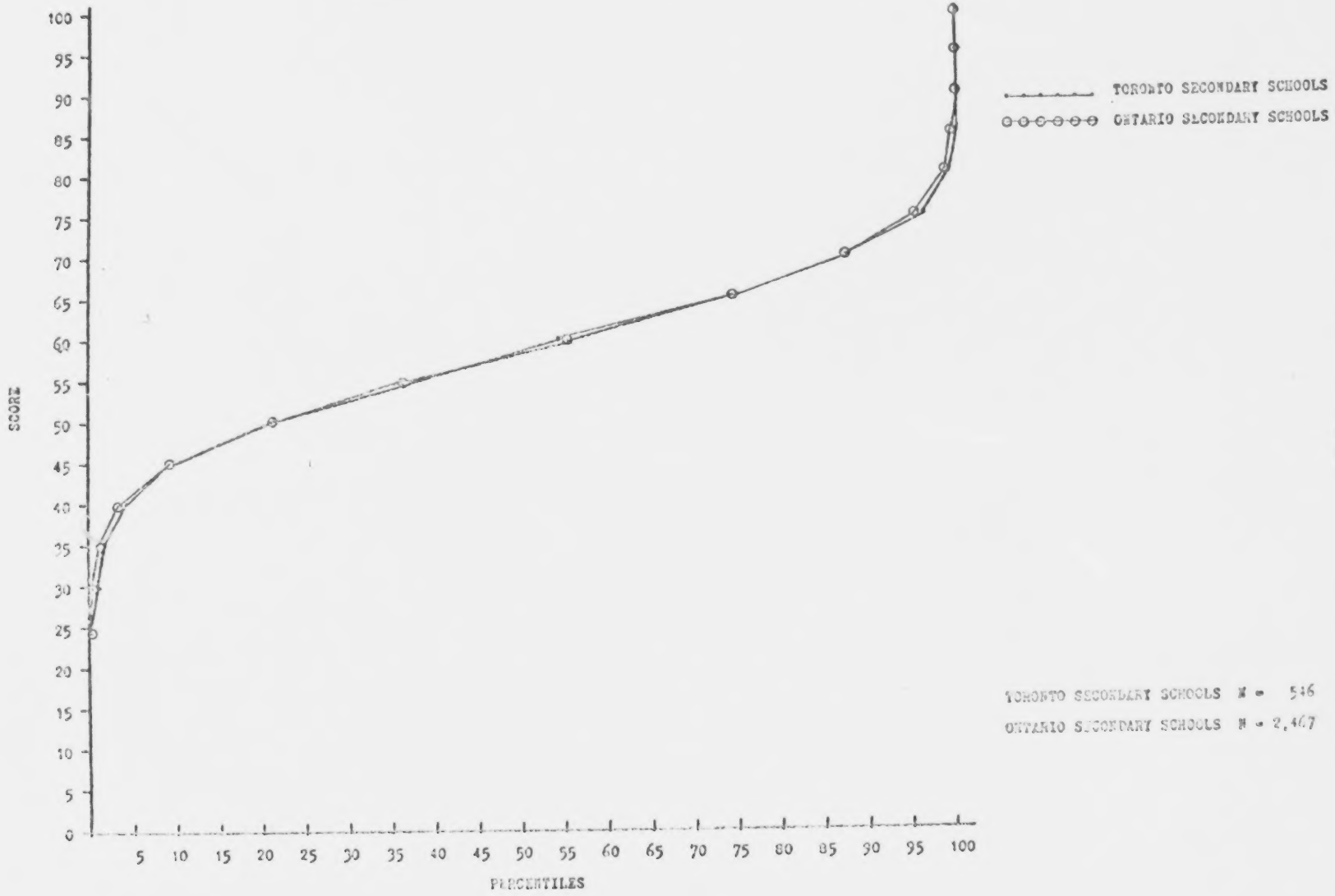
C.T.E.H.O. (Technical Course Students)

Until the 92nd percentile rank is reached, Ontario Technical students score higher than Toronto Technical students. After that the pattern is very similar with the ranks almost identical. At the 51st percentile both populations are at the same point on the scale. The pattern continues to persist then through to the end of the scale.

FIGURE 9

C.T.E.H.O.

ECONOMICS GRADE XII TECHNICAL COURSE



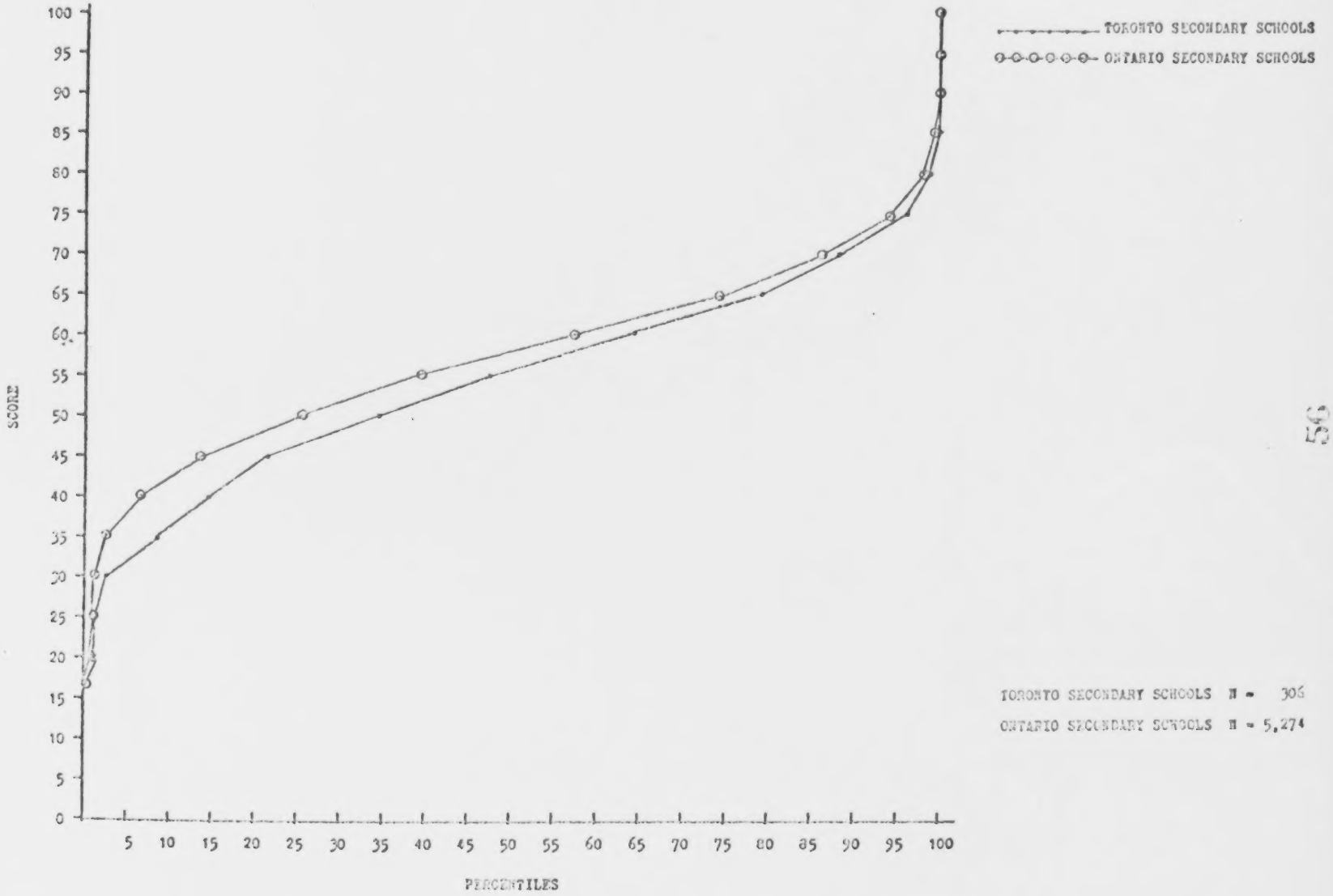
C.T.E.H.O. (Commercial Course Students)

At the 89th percentile rank the two populations are at the same point on the scale of values. Fifty per cent of the Ontario Commercial students scored below 58 while the corresponding percentile rank for Toronto students yielded a value of 56. Twenty-five per cent of the Ontario students scored below 50 while 35% of the Toronto students scored below the same value. The divergence becomes more marked as the lower end of the scale is reached with the Ontario population obtaining higher scores in relation to percentile ranks.

FIGURE 10

C.T.E.H.O.

ECONOMICS GRADE XII COMMERCIAL COURSE

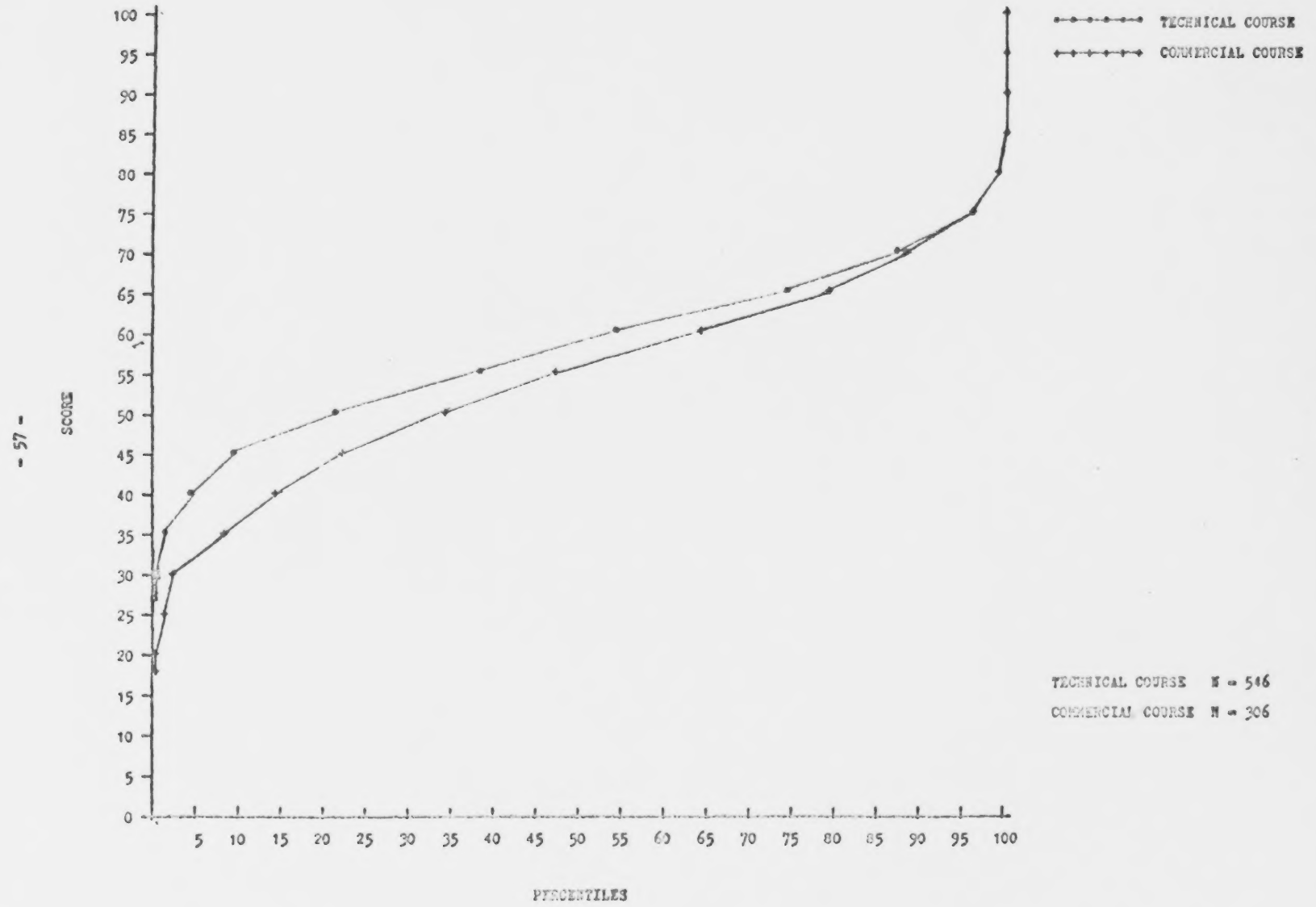


COMPARISON OF TORONTO TECHNICAL AND COMMERCIAL STUDENTS ON C.T.E.H.O.

Commercial and Technical students were found to score quite closely at the upper end of the scale. At the 50th percentile rank the Technical students are at the 59th point on the scale and the Commercial students are at the 56th. At the lower end of the scale, however, the scores diverge more widely. Thus 25% of the Technical students scored below 51 while the same percentage of Commercial students scored below 46.

FIGURE 11

COMPARISON OF TORONTO TECHNICAL AND COMMERCIAL STUDENTS ON C.T.E.H.S.



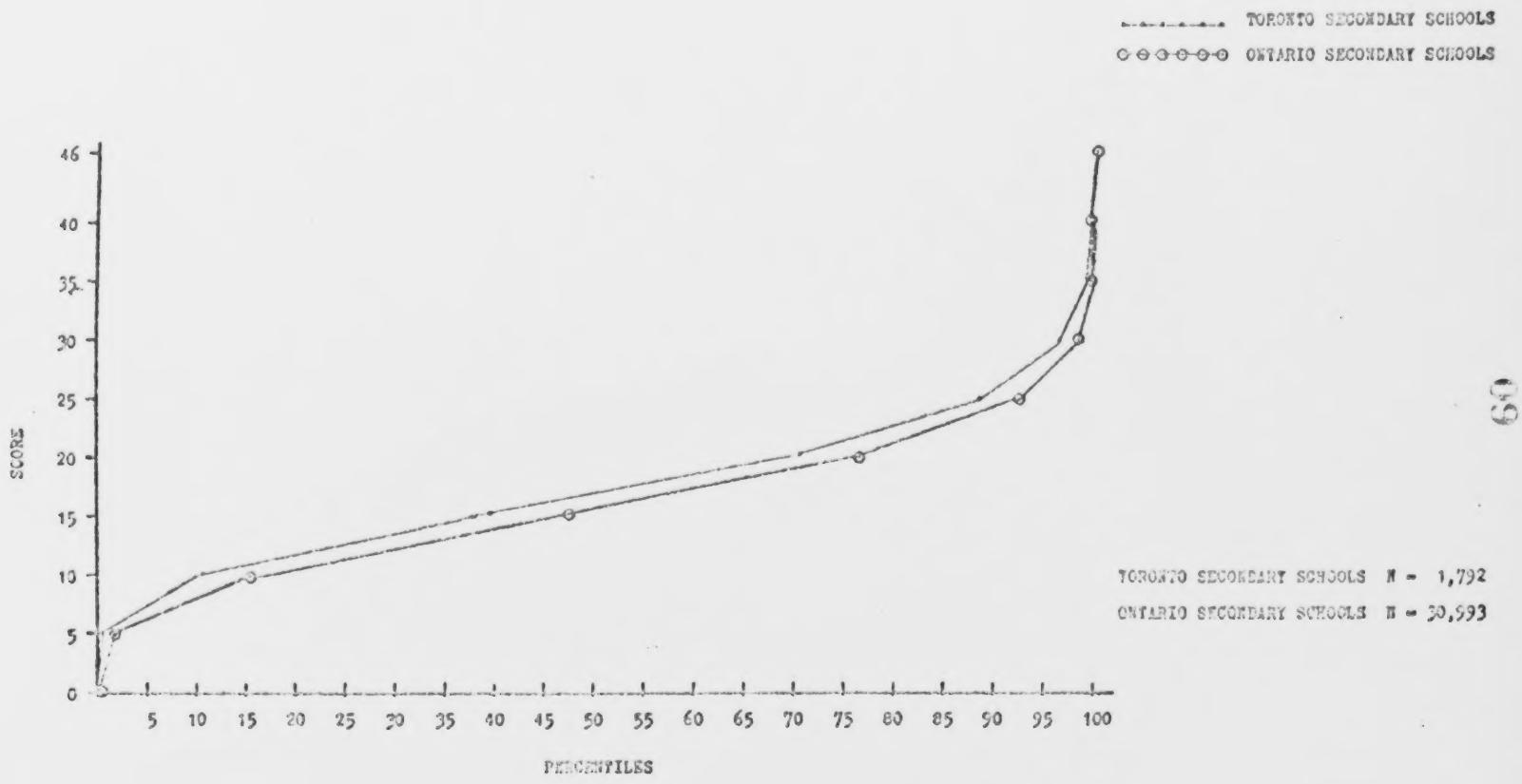
C.A.T.O. (General Course Students)

Quite a close similarity on scores is found between Toronto and Ontario students. A general superiority favouring the Toronto students is found, however, which reveals itself by a difference of at least one point on the scale for each percentile rank.

FIGURE 12

C.A.T.O.

ALGEBRA GRADE XII GENERAL COURSE



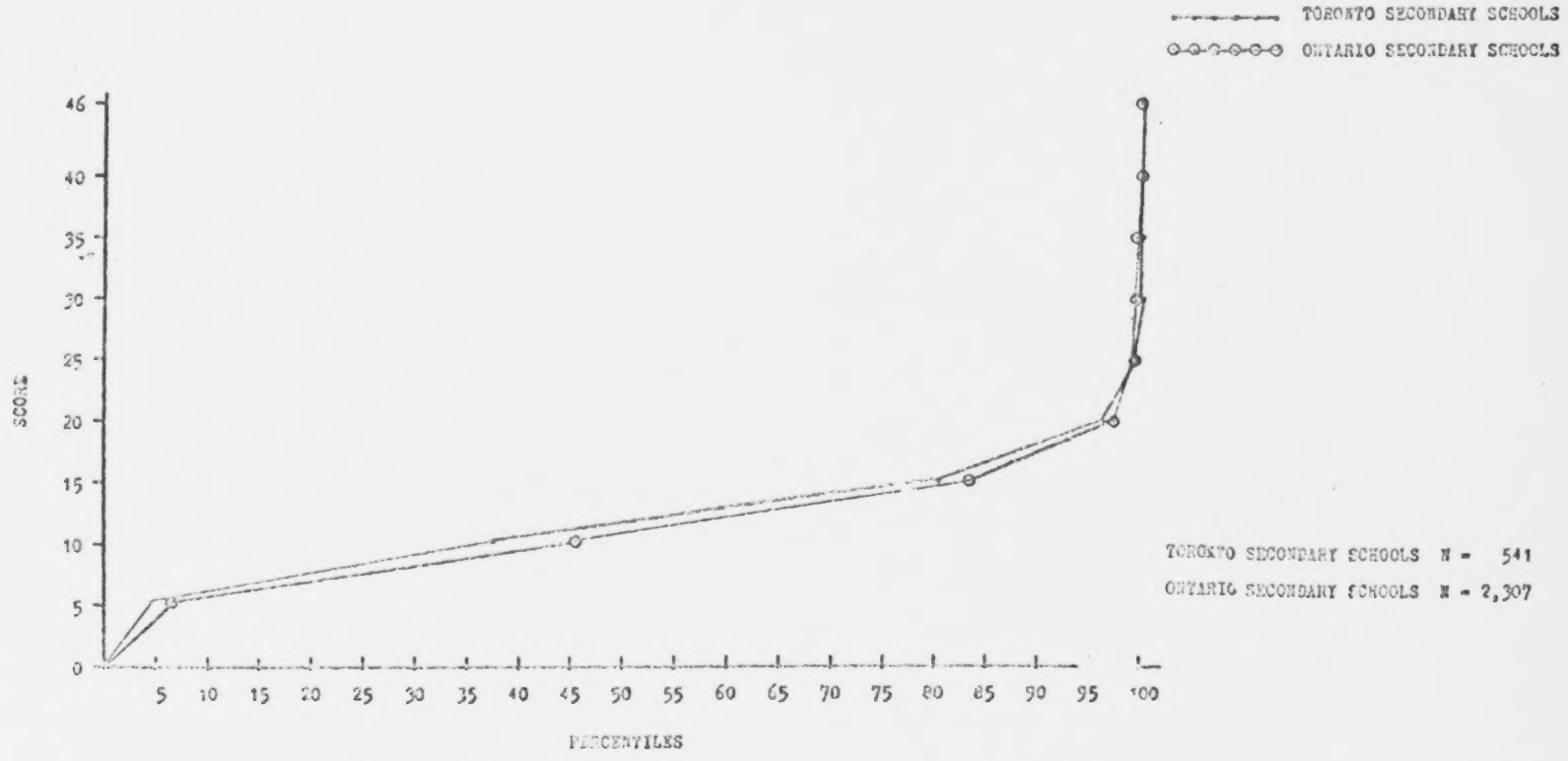
C.A.T.O. (Technical Course Students)

A general superiority favouring Ontario Technical students is found throughout this distribution. The difference amounts to at least one point on the scale for each percentile rank.

FIGURE 13

C.A.T.O.

ALGEBRA GRADE XII TECHNICAL COURSE

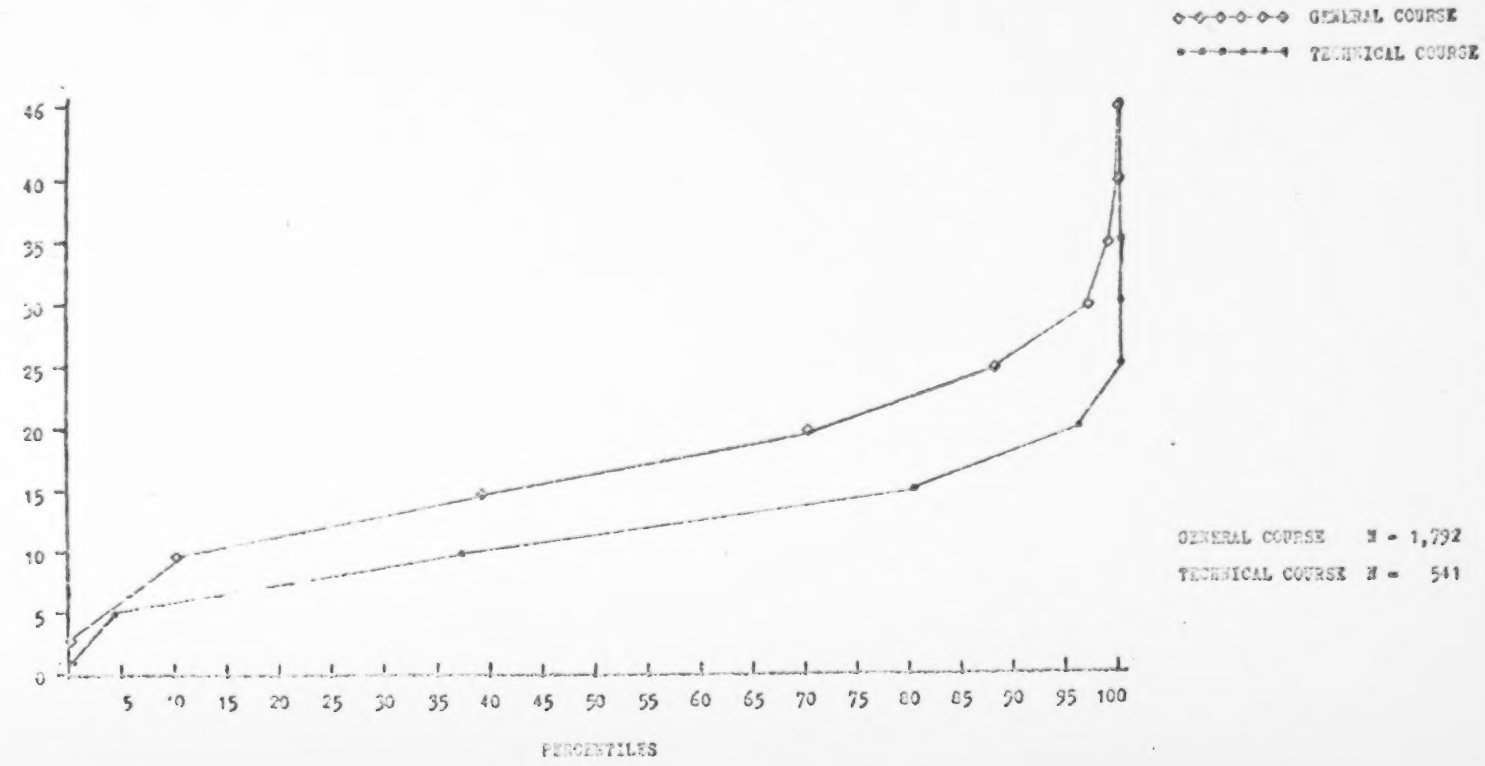


COMPARISON OF TORONTO GENERAL AND TECHNICAL COURSE STUDENTS ON C.A.T.O.

General course students have consistently higher scores than Technical course students, the difference amounting to at least 5 points on the scale for each percentile rank.

FIGURE 14

COMPARISON OF TORONTO GENERAL AND TECHNICAL COURSE STUDENTS ON C.A.T.O.



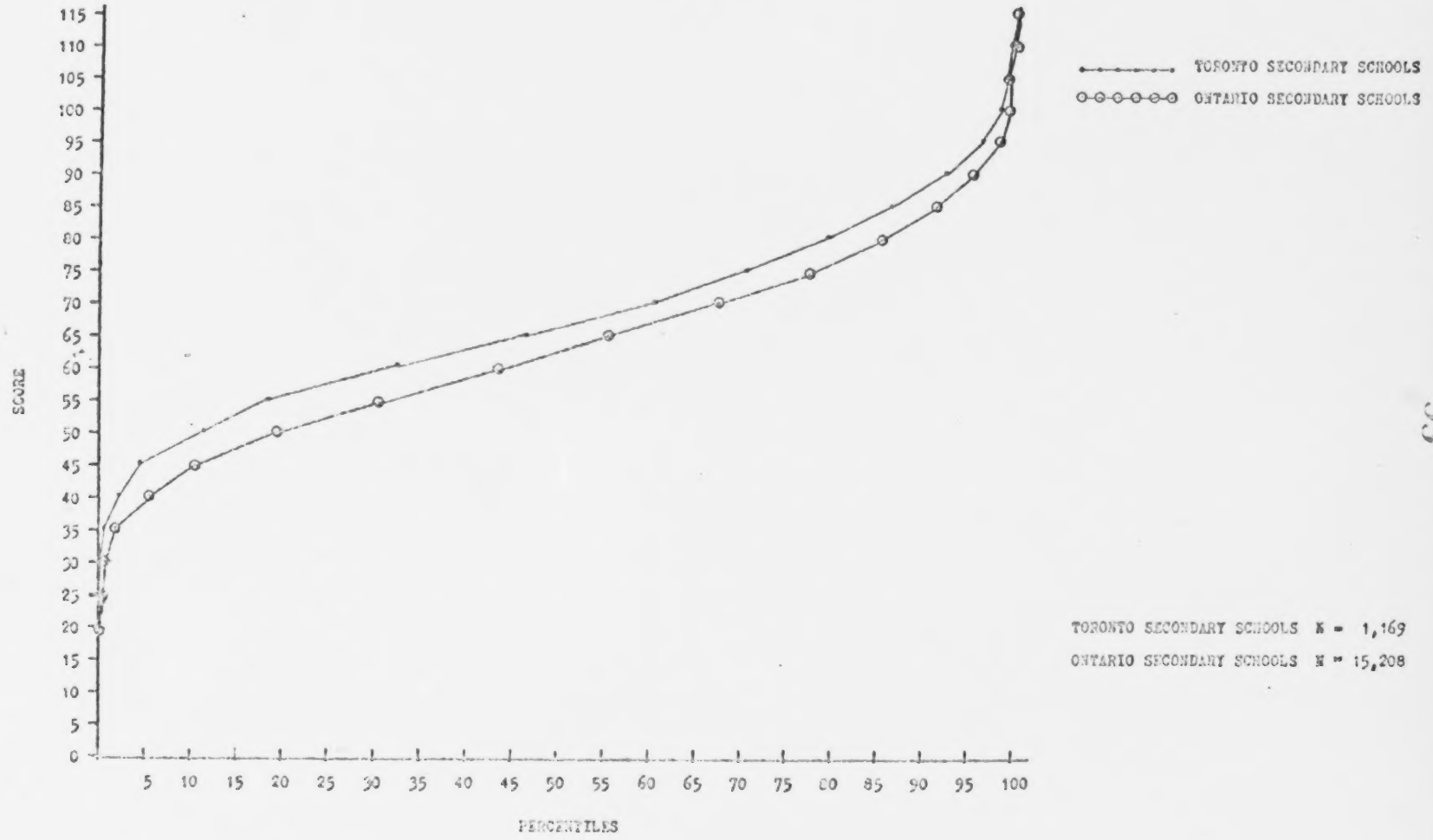
C.L.T.O. (General Course Students)

A general superiority for Toronto students is shown beginning at the upper end of the scale. Thus 72% of Toronto students scored below 78 while 82% of Ontario students scored below that point. Fifty per cent of Toronto students scored below 60 while 60% of the Ontario students scored below that point. These differences continue to persist so that 26% of the Toronto students scored below 58 and 38% of the Ontario students were below that same point on the scale.

FIGURE 15

C.L.T.O.

LATIN GRADE XII GENERAL COURSE



INTERPRETATION OF RESULTS

The main purpose of the report was to make available to principals and heads of guidance departments norms which would be specific to pupils in the City of Toronto Secondary Schools. The norms given for all Ontario Secondary Schools naturally included Toronto Schools. It was not possible with the data available to separate out the Toronto population within the Ontario norms nor did such a course of action seem to be warranted. No statistical analyses have been made of the results since to do so would duplicate work already being undertaken by the Department of Educational Research, Ontario College of Education.

The following general conclusions would appear to be warranted:

1. Norms of Grade 12 students in Toronto Secondary Schools diverged frequently from the norms of all Grade 12 Ontario secondary students. This suggests that comparisons of a pupil's standing in Toronto Secondary Schools should be made not only on the basis of Ontario norms but also of Toronto norms.
2. General course students in Toronto Secondary Schools were found to score consistently higher on tests of scholastic aptitude than pupils in all Ontario Secondary Schools. On the verbal section of the Scholastic Aptitude Test, Technical and Commercial students in the Toronto Schools showed a slight superiority when compared with the Ontario population. Toronto Technical course pupils showed a slight superiority over Ontario pupils on the mathematics section of the Scholastic Aptitude Test.
3. Comparisons of the three Toronto groups - General, Technical and Commercial - revealed that the General course pupils scored markedly

higher on academic aptitude tests than the other two groups. Technical course students scored slightly above Commercial course students.

4. General course students in Toronto Secondary Schools scored consistently higher on the achievement tests than the total Ontario population. The Toronto General course students also scored consistently higher than the Technical and Commercial course students.
5. On the achievement tests in economics and algebra, Toronto Technical course students were found to be quite close to the Ontario norms with a slight superiority shown for the Toronto population. On the achievement test in economics, Toronto Commercial course students had consistently lower scores than the Ontario norms.